

REMARKS

Claims 1-6, 12-14, 22, 23 and 26-30 are pending in this application. By this Amendment, claims 1-3, 12, 22 and 28-30 are amended. No new matter is added. In view of at least the following remarks, reconsideration and allowance are respectfully requested.

The courtesies extended to Applicants' representative by Examiner Patterson at the interview held October 22, are appreciated. The reasons presented at the interview as warranting favorable action are incorporated into the remarks below and constitute Applicants' record of the interview.

Claims 1, 2, 22, 24, 26, 28 and 30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,193,711 to Hirata et al. ("Hirata") in view of U.S. Patent No. 5,954,223 to Moore ("Moore"); and rejects claims 3-6, 12-14, 23, 25, 27 and 29 under 35 U.S.C. §103(a) as being unpatentable over Hirata in view of Moore and Japanese Patent No. 6246777 to Suzuki et al. (Suzuki) and Japanese Patent No. 03286815 to Asahi Chemical (Asahi Chemical). These rejections are respectfully traversed.

Responsive the Examiner's suggestion in the October 22 interview, Applicants have amended claim 1 above to recite the presence of an "injection gate mark." Applicants submit that the phrase "gate mark" is a well known in the field of injection molding to mean a protrusion of cured body forming material or a recession in the molded body, that is formed when the cured resin inside the injection gate is detached from the molded body. That is, during injection molding some molten resin remains in the injection gate and when it is cured it remains connected to the molded body. When the connection between the cured resin in the injection gate hole and the molded body is severed, either a protrusion of cured resin material or a recession in the molded article is created where the cured resin breaks off. Usually, the cured resin in the injection gate hole is severed by the injection gate itself when the molded body and the injection gate are separated from one another.

Furthermore, a brief search of both of the terms "gate mark" and "injection molding" in the Patent Office's website yielded over 100 Patents and over 50 Published Patent Applications, which strongly suggests that the phrase "gate mark" has an established meaning in the art. For example, as stated in U.S. Patent No. 7,282,006 (the first patent returned in our search):

Body 48 includes a gate mark 70 formed during the injection molding and subsequent body cooling processes. Gate mark 70 may be shaped as a reduced thickness portion including a recessed first surface 72 offset from first surface 56 as well as a recessed second surface 74 offset from second surface 66. Depending on the manufacturing process used, first surface 72 and/or second surface 74 may not be recessed but may protrude outwardly beyond first surface 56 or second surface 66. Accordingly, first plates 50 are spaced apart from one another at the location of gate mark 70. Similarly, second plates 52 are spaced apart from one another at gate mark 70.

This interpretation is supported in the specification in at least Fig. 7 and page 17, first and second paragraphs, which indicate that a mark 10b is formed during injection molding when the cylindrical article 10 is discharged from the molding mold. Furthermore, a brief search of various internet sites confirms that the term "gate mark" is widely known, per se, in the field of injection molding.

Accordingly, the applied references do not disclose or suggest an injection-molded article with "an injection gate mark positioned on said inner surface," as recited in independent claim 1. In this regard, it is noted that the Office Action equates the thickened portion 21 of the sidewall in Hirata (Fig. 13) with the "mark" recited in claim 1. However, the thickened portion is not an "injection gate mark" under any reasonable interpretation of the claim language because it is not formed by severing the connection between the cured resin in the injection gate hole and the molded body. In this regard, referring to Fig. 12 of Hirata, the thickened portions of the sidewall in Hirata are formed by cut surfaces 20 on the outer periphery of core 8. See Hirata at col. 7, lines 5-20. The thickened portion is not

formed by severing a connection with cured body forming material present in the injection hole. In this regard, the injection hole in Hirata runs through the center of the core and is illustrated in Figs. 10(A) and 10(B).

Independent claim 3 recites a method for making an insertion-molded article where the molten resin is injected at a position on the molded body inner surface of the sidewall that is covered by the insert so that the "injection gate mark is covered by the insert." For the reasons discussed above, the "mark" cited in the Office Action as allegedly being on the inner surface does not correspond to an injection gate mark.

Furthermore, claim 3 recites that the "molten resin passes through the injection gate opening in a direction toward said molded body inner surface of the sidewall portion." As discussed in the interview, Hirata fails to suggest this feature because the injection gate opening is oriented in a downward position, as is clearly illustrated in Figs. 10(A) and 10(B).

During the interview, the Examiner indicated that the molten resin will still be injected toward the sidewall because it travels generally along the path illustrated in Fig. 2(A). Applicants understand the Examiner's position, but respectfully assert that the claim language requires that the molten resin passes through an opening going in a certain direction. As an opening can be considered to generally define a plane, matter will pass through the plane traveling in one direction. It is evident from Figs. 10(A) and 10(B) of Hirata that the mold is clearly configured so that molten resin will pass through the opening while traveling downwardly. There is no structure in Hirata enabling molten resin to pass through an opening while traveling toward the sidewall, as required in claim 3. Accordingly, for the above reasons, independent claim 3 is patentable over the applied references.

Independent claims 28 and 30 recite similar features referred to in connection with claims 1 and 3 above. Thus, independent claims 28 and 30 are patentable over the applied references.

Accordingly, withdrawal of the rejections is respectfully requested.

Claims 2, 4-6, 12-14, 22, 23, 26, 27 and 29 depend from one of independent claims 1 and 3 and are therefore also patentable over the applied references for at least the reasons enumerated above, as well as for the additional features they recite.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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